

What is claimed is:

1. An implant system comprising
a ferromagnetic material sized and configured for
implanting in a tissue region in a lateral pharyngeal
5 wall along a pharyngeal conduit, and
a source of magnetic force sized and configured for
placement to interact with the ferromagnetic material to
resist collapse of the tissue region.
2. A system according to claim 1
10 wherein the source of magnetic force is sized and
configured for implantation in a tissue region in one of
a pharyngeal conduit, a tongue, a pharyngeal wall, an
epiglottis, a vallecula, and a soft palate/uvula.
3. A system according to claim 1
15 wherein the source of magnetic force interacts by
repelling the ferromagnetic material implanted in the
lateral pharyngeal wall.
4. A system according to claim 1
wherein the source of magnetic force is sized and
20 configured for implantation in a tissue region external
to the pharyngeal conduit.
5. A system according to claim 1
wherein the source of magnetic force is sized and
configured for placement external to the pharyngeal
25 conduit.
6. A system according to claim 5
wherein the source of magnetic force is sized and
configured for placement on one of an oral cavity, a
neck, a jaw, and a head.
7. A system according to claim 1
30 wherein the source of magnetic force interacts by
attracting the ferromagnetic material implanted in the
lateral pharyngeal wall.
8. An implant system comprising
35 a ferromagnetic material sized and configured for

implanting in one of a soft tissue region defining a portion of a pharyngeal conduit, a soft tissue region in a lateral pharyngeal wall, and combinations thereof, and

5 a source of magnetic force sized and configured for
implanting in one of a tongue, an epiglottis, a soft
palate/uvula, a vallecula, in another soft tissue region
in a lateral pharyngeal wall, in an opposite lateral
pharyngeal wall, and combinations thereof, to repel the
10 ferromagnetic material and resist collapse of the soft
tissue region.

9. A system according to claim 1 or 8
 wherein the ferromagnetic material is sized and
configured for implanting in the tissue region through a
15 tonsil fossa.

10. An implant system comprising
 a ferromagnetic material sized and configured for
implanting in a tongue, and
 a source of magnetic force sized and configured for
20 placement to interact with the ferromagnetic material in
the tongue.

11. A system according to claim 10
 wherein the ferromagnetic material is tethered to an
anchoring structure implanted in the tongue.

25 12. A system according to claim 10
 wherein the ferromagnetic material is coupled to a
hyoid bone.

13. A system according to claim 10
 wherein the ferromagnetic material is implanted in
30 one of a lateral tissue region of the tongue, an anterior
tissue region of the tongue, a posterior tissue region of
the tongue, and combinations thereof.

14. A system according to claim 10
 wherein the source of magnetic force is sized and
35 configured for implantation in a tissue region in one of

a pharyngeal wall, a soft palate/uvula, and combinations thereof.

15. A system according to claim 10

wherein the source of magnetic force is sized and
5 configured for placement in a tissue region external to the tongue.

16. A system according to claim 15

wherein the source of magnetic force is sized and
configured for placement on one of an oral cavity, a
10 neck, a jaw, and a head.

17. A system according to claim 10

wherein the source of magnetic force interacts by
repelling the ferromagnetic material implanted in the
tongue.

15 18. A system according to claim 10

wherein the source of magnetic force interacts by
attracting the ferromagnetic material implanted in the
tongue.

19. A system according to claim 1 or 8 or 10

20 wherein the ferromagnetic material includes a soft
ferromagnetic material.

20. A system according to claim 1 or 8 or 10

wherein the ferromagnetic material includes a
permanent magnet.

25 21. A system according to claim 1 or 8 or 10

wherein the ferromagnetic material comprises at
least two discrete sources of magnetism, and

further including a flexible polymer matrix carrying
the at least two discrete sources of magnetism in a
30 spaced apart relationship, the polymer matrix allow
flexure between the sources of magnetism.

22. A system according to claim 21

wherein the flexible polymer matrix includes a
biocompatible protective material.

35 23. A system according to claim 21

wherein the flexible polymer matrix includes a tissue in-growth material.

24. A system according to claim 21

5 wherein the flexible polymer matrix includes a mechanical tissue stabilization element.

25. A system according to claim 1 or 8 or 10

10 wherein the ferromagnetic material comprises one of a generally horizontal array of ferromagnetic materials implanted in the tissue region, a generally vertical array of ferromagnetic materials implanted in the tissue region, a generally angular array of ferromagnetic materials implanted in the tissue region, and combinations thereof.

26. A system according to claim 1 or 8 or 10

15 wherein the source of magnetic force includes one of a permanent magnet and an electromagnet.

27. A system according to claim 1 or 8 or 10

20 wherein the source of magnetic force comprises at least two discrete sources of magnetism, and further including a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allow flexure between the sources of magnetism.

28. A system according to claim 1 or 8 or 10

25 wherein the ferromagnetic material is sized and configured for implantation within an implantation sleeve.

29. A system according to claim 28

30 wherein the implantation sleeve includes a mechanical tissue stabilization device.

30. A method for treating sleep disordered breathing using an implant system defined in claim 1 or 8 or 10.

31. An implant device comprising

35 at least two discrete sources of magnetism, and

a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allow flexure between the sources of magnetism.

- 5 32. A device according to claim 31
 wherein the sources of magnetism comprise ferromagnetic materials.
33. A device according to claim 32
 wherein the ferromagnetic materials include soft
10 ferromagnetic materials.
34. A device according to claim 32
 wherein the ferromagnetic materials include permanent magnets.
35. A device according to claim 31
15 wherein the at least two discrete sources of magnetism comprises electromagnets.
36. A device according to claim 31
 wherein the flexible polymer matrix includes a biocompatible protective material.
- 20 37. A device according to claim 31
 wherein the flexible polymer matrix includes a tissue in-growth material.
38. A device according to claim 31
 wherein the device is sized and configured for
25 implantation in one of a pharyngeal wall, a tongue, a soft palate/uvula, an epiglottis, and a tissue region in a pharyngeal conduit.
39. A method a treating sleep disordered breathing using the implant device defined in claim 31.